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ABSTRACT

Based on the premise that instructional development is a change process and the instructional developer is a change agent, this chapter begins by considering the literature of planned change as applied to the process of instructional development. It is argued that instructional product evaluation must include both formative and summative evaluation of the change process as well as process evaluation. Process as the focus of evaluation is considered, and classical diffusion theory is presented as well as criticism of the theory. Characteristics of projects likely to be successful are listed together with the stages these projects go through. The roles of change agents and whether to use internal of external agents are discussed, and client contact with agents is outlined. Both evaluation questions for use by and/or with a change agent and a topical checklist intended to serve as a quick-reference guide to key factors important to the evaluation of planned change efforts are provided. (32 references) (Author/EW)

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Chapter 30

Evaluating Instructional Development Projects: Guidance from the Literature on Change

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The premise of this chapter is simple. Instructional development implies planned change—a process of moving from the status quo to some new arrangement through the application of a systematic approach to the analysis of problems and the development of solutions. To the extent that examining process is important in evaluating programs, then understanding the change process accompanying instructional development efforts should be a focus for evaluators working in an instructional development context. Both formative and summative evaluations of instructional development efforts should include an analysis of the change efforts underlying instructional development. Consequently, evaluators should be familiar with basic information about change in order to effectively plan their investigations.

Given the above premise, this chapter presents a synthesis of the literature on planned change as a guide to evaluating the change process. In addition, key evaluation questions related to change issues are included throughout. The chapter concludes with a topical checklist for preparing an evaluation of an innovative instructional project. To accomplish these goals, the chapter is organized into the following sections:

PROCESS AS THE FOCUS OF EVALUATION
THE DIFFUSION OF INNOVATIONS
Individuals and Change
Evaluation Questions
PLANNED CHANGE
Some Classic Models of the Planned Change Process
The Distinction between
Initiation and Implementation
Importance of the Distinction
Evaluating Implementation
Supporting Implementation
Evaluation Questions
RESISTANCE TO CHANGE
Other Sources of Resistance
Importance of Performance Gaps
Evaluation Questions
CHANGE AGENTS
Change Agent Roles
Internal or External Change Agents?
Similar or Different?
Client Contact
Evaluation Questions
TOPICAL CHECKLIST
Checklist

PROCESS AS THE FOCUS OF EVALUATION

By examining process as well as outcomes, evaluators can offer clients a more thorough assessment of the overall effects of projects. As pointed out by Morris and Fitz-Gibbon (1978), evaluations designed with process in mind provide information for eventual use in program planning

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and development by helping to identify what works in which settings. For example, process evaluation might reveal the critical importance of certain interpersonal relationships to the success or failure of a project.

Process evaluation is, in fact, already considered an integral component of many evaluation models. It is explicit in the CIPP model (Context, Input, Process, Product) proposed by Stufflebeam, et al. (1971), in which process is defined as "a particular and continuing activity subsuming many methods and involving a number of steps or operations." They describe three functions of process evaluation: (1) to detect or predict defects in the procedural design or in its implementation during implementation stages, (2) to provide information for decision-making, and (3) to maintain a record of the process.

Stake's "countenance" model of evaluation (1967) also recognizes the importance of evaluating more than outcomes. He suggests that evaluators pay attention to:

1. Antecedents: what existed before the project was implemented,
2. Transactions: what was done or what transpired, and
3. Outcomes: what resulted.

The "Transactions" component of the model may be thought of as being concerned with process. Stake describes transactions as including the "countless encounters of students with teacher, student with student, author with reader, parent with counselor--the succession of engagements which comprise the process of education." It is a small step to include the encounters between instructional developers and clients in this transaction category. Stake's continuing interest in process evaluation is reflected by his concern for a "responsive" evaluation, he proposes that evaluators be sensitive to the issues which arise from designing and operating projects, as these issues are identified through interactions with the participants in the projects.

Process evaluation is also important to the "illuminative evaluation" paradigm of Parlett and Dearden (1977). They suggest that evaluators study programs as a whole, including their rationale and evolution, operations, achievements and difficulties. Parlett and Dearden argue that the aim of illuminative evaluation is to study innovative programs--how they operate, how they are influenced by the setting, the significant features of the innovations and more. They insist that innovations should not be examined in isolation, but in the context in which they exist. In short, they make a persuasive case for evaluation of the process of developing and installing innovative projects as well as studying outcomes.

Given that the evaluation of process is important, what process issues should be examined in evaluating educational change efforts? Information about how people and organizations respond to change and the diffusion of innovations should point out some important process-oriented evaluation questions.

THE DIFFUSION OF INNOVATIONS

Much of the early research on innovation focused on the manner in which innovations spread or "diffused" to individuals and groups in a given geographic area such as across a town or throughout a country. This early work was primarily by rural sociologists who studied the agricultrual community, both in the United States and abroad. They were concerned with how individuals make the decision to adopt innovative farming practices and equipment once they become aware of its existence. An early result of such studies was a simple and very useful operational definition of what was meant by "innovation." Rogers and Shoemaker, in their landmark work Communication of Innovations (1971), describe an innovation as:

> an idea, practice or object perceived as new by any individual. It matters little, so far as human behavior is concerned, whether or not an idea is "objectively new" as measured by the lapse of time since its first use or discovery. It is the perceived or subjective newness of the idea for the individual that determines his reaction to it. If the idea seems new to the individual, it is an innovation.

In other words, the important issue is the perceived or subjective newness of the innovation. Simply because an idea, practice or program has been tried elsewhere doesn't mean that in a new setting it is no longer an innovation. In fact, if the idea **seems** new to people, they will react to it as an innovation. This is equally true whether people are reacting to change as individuals or as members of organizations.

Individuals and Change

In analyzing the diffusion of innovations, Rogers and Shoemaker (1971) studied the manner in which individuals make decisions to adopt or reject innovations. They concluded that individuals follow a four-step process in the adoption of innovations:

1. Knowledge: The individual is exposed to the innovation's existence and gains some understanding of how it functions.
2. Persuasion: The individual forms a favorable or unfavorable attitude toward the innovation.
3. Decision: The individual engages in activities which lead to a choice to adopt or reject the innovation.
4. Confirmation: The individual seeks reinforcement for the innovation-decision he has made, but may reverse his previous decision if exposed to conflicting

messages about the innovation.

Their model improved upon earlier efforts to describe the adoption process because it allowed for rejection decisions, as well as for adoption decisions. They also made provision for individuals who reverse their positions when they receive information which casts doubt on their original decisions.

In studying the individual adoption process, Rogers and Shoemaker found that the rate at which individuals adopt innovations varies. They described the degree of innovativeness as the degree to which individuals are relatively earlier in adopting new ideas than are other members of their social systems. Based upon the classification of the members of a social system with respect to degree of innovativeness, five categories of adopters were identified. At one end of the continuum are the **innovators,** who readily adopt innovations. They are followed by the **early adopters,** who are the next to adopt innovations. The **early majority** and the **late majority** follow the early adopters. All of these people preceed the **laggards,** who either adopt the innovation very late or never adopt it at all.

The authors wish to extend their sincere appreciation to their colleagues at the Center for Instructional Development at Syracuse University for taking time to read a draft of this chapter and sharing their suggestions for its improvement.

Rogers and Shoemaker report that "research has generally shown that the adoption of an innovation follows a normal, bell-shaped curve when plotted over time on a frequency basis." The figure below shows the normal frequency distribution of adopters, divided into five categories defined in terms of the mean and standard deviation (adapted from Rogers and Shoemaker).

It is helpful to know that in most social settings each of these categories will contain some people. However, this knowledge is even more important when combined with an understanding of three important roles individuals play in a change effort: **gatekeepers, opinion leaders,** and **formal leaders.** As the word implies, a gatekeeper is someone who is in a position to permit or deny access to people, information or resources. An opinion leader is a person whose opinion is well respected in the social system--the kind of person to whom others turn for advice and counsel. A formal leader is a person in a position of leadership--for example, the principal of a school or the manager of a department (Rogers and Shoemaker, 1971).

People in these roles can have a great deal of influence over innovative projects. For example, a gatekeeper who is a laggard (or resister to change) can exert an important negative influence by giving project-related tasks low priority or by denying access to information or people who are important to the project. An opinion leader who is an early adopter can be very persuasive in convincing other members of the organization to adopt an innovation. Formal leaders may not have the status of an opinion leader as well, but their formal authority should not be ignored, because they can use their formal power to block or support change.

Evaluation Questions

The understanding of various individual roles and characteristics is important for evaluators who are studying instructional development efforts, because it helps them to identify important issues. Durzo (1978) reported two key issues known to be important in assessing individuals' reactions to change: (1) the degree to which individuals are rewarded for participation in change efforts and (2) the degree to which individuals are willing participants--willing to innovate. The following questions provide a starting point for evaluators concerned with those issues:

1. To what degree were faculty members who participated rewarded for their efforts?
   - -- What is the reward-structure for faculty members who work on projects?
   - -- How do faculty members perceive the reward-structure?
   - -- Are there any negative results from being involved in the instructional development process?
   - -- What actually happens to participants in innovative projects? Do they stay at the institution? Get promoted? Receive tenure?
2. Were faculty members willing to innovate? Were faculty members initiative and was support provided?
   - -- Who initiated the change? Faculty members or administrators?
   - -- What activities were undertaken in the innovation decision-process to gain faculty support? What was done with respect to:
     - **knowledge:** What was done to make people aware of the innovation?
     - **persuasion:** What steps were taken to help individuals make up their minds about the innovation? Site visits? Research reports? Evaluation studies?
     - **decision:** When was the decision made? What led to the decision to accept or reject the innovation? How was the decision made?
     - **confirmation:** Were individuals reinforced or contradicted in their decisions by later information?
   - -- What was the general level of support among the faculty for the

project?

-- How were participants chosen? Were they volunteers or were they "drafted"?

-- Who are the gatekeepers, opinion leaders and formal leaders in the organization? How did they feel about the project? What impact did they have upon it?

PLANNED CHANGE

A key point about the Rogers and Shoemaker model, and to some degree about the diffusion tradition as a whole, is that it focuses upon individuals. The Rogers and Shoemaker model has been criticized because it is primarily concerned with the adoption of simple innovations by individuals. Gross, Giacquinta and Bernstein (1971) argue that the individual-adoption model is ineffective as a tool for understanding innovation in educational settings, because most educational innovations are not easily implemented by individuals without the help (or at least the permission) of others. In addition, they suggest that many innovations are so complex that they cannot simply be tried out in a neat, either/or fashion, and may require several years of observation before adequate judgments can be made about their suitability for permanent adoption.

In a later work with another author, Rogers took up the study of innovation in organizations (Rogers and Rogers, 1976) and found that the innovation process must be preceded by a problem-definition stage. Presumably the innovation developed or selected would then be one which would help the organization to solve its problems. This new focus upon matching the needs of the organization with the innovation represents a bridge from the sociologists' study of how individuals decide about innovation to a parallel study of planned change in organizations.

In 1958, Lippit, Watson and Westley, in their landmark work, The Dynamics of Planned Change, defined planned change as:

> change which derives from a purposeful decision to effect improvements in a personality system or social system and which is achieved with the help of professional guidance.

Later, Bennis described planned change as a linkage between theory and practice or between knowledge and action. He explained that planned change involves "a change agent, a client system, and the collaborative attempt to apply valid knowledge to the client's problem" (1969). Using this framework, instructional development may be viewed as a specific type of planned-change effort in which an instructional developer functions as a change agent to help a client apply knowledge about learning, instruction and educational technology to the solving of educational problems. Evaluation of instructional development, then, may be thought of as evaluating a specific type of planned-change effort.

Evaluating planned change may be made easier by having "conceptual handles" with which to grasp what might otherwise be very elusive issues. In other words, understanding something about planned change should make it possible to identify key evaluation questions more readily. An overview of several classic models of the change process is a good place to start. It is important, however, to point out that reducing the change process to numbered steps on a printed page tends to make the process seem very simple and rational. At best, models are only abstract reductions of very complex organizational events. However, familiarity with several models of the change process will provide evaluators with a starting place from which to begin their investigations of planned change and innovation efforts.

Some Classic Models of the Planned Change Process

In 1958 Lewin outlined a simple three-stage model of the change process which is the basis for many later change models:

1. unfreezing
2. moving
3. re-freezing

By "unfreezing" Lewin means breaking those existing social habits or customs which are the basis of an "inner resistance" to change in any given situation. This is a keystone idea in the planned-change literature. If the social requirements of a new situation are not congruent with those of the old one, some additional energy must be directed at changing the old customs so that they do not act as a barrier to a desired change. For example, if an organizational change requires teachers to alter their traditional teaching methods, they might resist the change because of their preference for the existing methods. To get the teachers to change, it would be necessary to "unfreeze" their existing habits and social norms. It is important, therefore, to analyze the norms, habits, customs and other sources of resistance among the target-group members so that energy may be directed at unfreezing them.

"Moving" refers to a change from the old situation to the new one. In the case of the teachers, instituting the new organizational pattern and the required changes in teaching method would entail moving them from the status quo to the desired state of affairs. If sufficient energy was directed at wining their endorsement of the change, appropriate steps could then be taken to "re-freeze" their new social habits to conform with the requirements of the innovation.

Burke, in an interview which appeared in Group and Organization Studies (1980) asserted that even today, after much elaboration on this simple model, change agents would not go far wrong if they simply remembered these three phases. Nonetheless, examining several more-

detailed models will provide additional points of entry for process evaluation. For example, Lippit, Watson and Westley (1958) developed a list of seven phases of a change process:

1. Development of a need for change.
2. Establishment of a change relationship (between the client and a change agent).
3. Clarification or diagnosis of the client system's problem.
4. Examination of alternative routes and goals; establishing goals and intentions of action.
5. Transformation of intentions into actual change.
6. Generalization and stabilization of change.
7. Achievement of a terminal relationship.

More recently, Havelock's model (1973) provides a similar list of stages of the change process:

1. Building a relationship (between change agent and client).
2. Diagnosing the problem
3. Acquiring relevant resources.
4. Choosing the solution.
5. Gaining acceptance.
6. Stabilizing the innovation and generating self-renewal.

An important point about these models is that they both start with a definition of the problem, move through an analysis phase, and go on to an action phase. This is followed by some sort of activity designed to terminate the relationship between the client and the change agent.

The Distinction Between Initiation and Implementation

An important distinction made by Zaltman, Duncan and Holbek (1973) is that the change process in organizations may profitably be thought of as occurring in two major phases--the initiation phase and the implementation phase.

Stage I—Initiation Stage

1. Knowledge-awareness substage
2. Formation of attitudes toward innovation substage
3. Decision substage

Stage II—Implementation Stage

1. Initial implementation substage
2. Continued-sustained implementation substage

Briefly, Zaltman et al. argue that at the Initiation Stage the organization goes through those activities which are necessary in order to make a decision about whether or not to adopt and implement the change. For example, during this stage members of an organization become aware of an innovation and of its significance. Based upon what they know about their problems and about the innovation, they form attitudes about its potential utility, and then decide whether or not to adopt it. Only then does the organization move to Stage II, in which implementation is considered. In Stage II the organization puts the innovation into place in a pilot or test version, and if it succeeds, it moves on to some sort of full implementation or a continued or sustained basis.

The idea of initiation and implementation stages has other support in the change literature. Berman, Greenwood, McLaughlin and Pincus (1975) also distinguish between initiation and implementation in their analysis of federally-supported change efforts in the public schools. They describe a three-stage model of change, which represents an elaboration upon the work of Zaltman et al. by giving separate consideration to initial and continued implementation:

1. Initiation: the period when a project is conceived and support is sought for it.
2. Implementation: the stage when a project confronts the reality of the organizational setting; and
3. Incorporation: the final stage when a project moves from experimental status and becomes a part of the daily environment of the institution.

Importance of the Distinction

The separation of the change process into initiation and implementation phases is important for evaluating instructional development because it provides an approach for considering the tactics used in accomplishing change. Unless the strategies chosen match the stage of the process, they may not achieve the desired results. For example, a workshop illuminating the mathematics problems of freshman students may be an excellent strategy for convincing college faculty members that a problem exists and for preparing them for the need to change (initiation). Such a workshop would, however, be ineffective as an implementation strategy intended to help them devise ways of developing and pilot-testing potential solutions. Evaluators, then, should be concerned about determining what types of activities were undertaken for each stage of the project.

Evaluating Implementation

During the implementation stage a wide variety of activities can take place which might alter the faithfulness with which the original idea or innovation is implemented. Berman et al. (1975) describe three things which could happen in a school system during the implementation stage of externally developed innovations:

1. **Mutual adaptation.** Both the project design and the institutional setting are changed;
2. **Non-implementation.** Neither element is changed, usually because of institutional indifference or lack of ability;

3. **Co-optation.** The institution changes the project (usually emasculating it) to meet its needs, without any corresponding change in the institution.

Hall and Loucks (1977) go further in guiding the evaluation of implementation by describing eight levels of use of innovations.

Nonuse:	The user knows little or nothing about the innovation, has no involvement with it and is doing nothing about becoming involved.
Orientations:	The user has recently acquired information about the innovation.
Preparation	The user is preparing for the first use of the innovation.
Mechanical Use:	The user is focusing effort upon the day-to-day use of the innovation and is trying to master the tasks required for use, often resulting in superficial use. Changes being made are for user needs rather than client needs.
Routine:	The use of the innovation is stabilized with few, if any, changes being made in ongoing use and little thought being given to modifications.
Refinement:	The user varies the use of the innovation based upon knowledge of short- and long-term effects upon clients.
Integrations:	The user combines the use of the innovation with efforts of colleagues in order to achieve collective impact.
Renewal:	The user re-evaluates the quality of the use of the innovation, seeks major modifications or alternatives, explores new developments and alternative goals for self and system.

Supporting Implementation

What, then, are the attributes of projects which have successful implementation records? Summarizing the results of a large study of educational innovations in the public schools conducted by the Rand Corporation, Greenwood, Mann and McLaughlin (1975) report that projects having the fewest implementation problems have the following characteristics:

1. strong training components (for users to teach them about the innovation),
2. practical "how to do it" workshops,
3. local expertise and technical assistance,
4. frequent, regular staff meetings,
5. local materials development,
6. voluntary, highly-motivated participants,
7. an elementary school focus, and
8. a "critical mass" of project participants.

They also observe that the following attributes of the institutional setting influence the implementation of projects:

1. administrative support and commitment,
2. past experience with the particular innovation,
3. high propensity to innovate,
4. administrative flexibility, and
5. good communications.

Evaluation Questions

The change process is complex and fraught with difficulty and uncertainty for those involved in academic re-design. Successful completion of planned change efforts requires (1) assistance in implementation and initiation stages, (2) time to work on the project, (3) an understanding of the proposed innovation by participants, (4) a supportive climate, (5) appropriate resources--time, money, people, and (6) the ability to adapt the innovation to the institution and vice-versa. Evaluation efforts should attempt to determine the existence and impact of such implementation support. It is important to know what was done during the implementation stage and how it affected the outcomes of the effort. The following questions are a starting-point for that inquiry:

1. Was assistance provided in both the implementation and initiation stages of the change process?
   - What initiation activities were there? What kind of support was available during this phase? For example:
     - Were site visits made to similar projects?
     - Were consultants brought in to help plan the project?
   - Is the innovation being used as planned?
   - Is the innovation being used evenly by all members of the organization? Which members are using it as planned?
   - What kinds of adaptations were made in the innovation or in the organization during implementation?
   - What types of activities were undertaken to support implementation? What was done to facilitate implementation?
   - Were the activities chosen for each stage well-matched to accomplish the goals of each stage? In other words, were implementation-type strategies

used at the implementation stage?

2. How was time provided to faculty members to allow them to participate in the project?
   -- Were faculty members given released time during the academic year or paid for summer work? Both? Neither?
   - Were project time lines realistic for accomplishing intended outcomes? Who set the time lines?
3. Did faculty members understand the proposed innovation well? Were they provided the opportunity to learn about it?
   -- How did faculty members learn to use the innovation? Formal training? Informal training? Peer communication? Independent work?
   -- Did lack of knowledge restrict the eventual level of use of the innovation or modifications made during use?
4. Was the institutional climate supportive? Did the president and other high-level administrators support it?
   -- What was the nature of administrative support?
   -- What is the history of the institution with respect to supporting change?
   -- Is good teaching important? How is it recognized?
5. Were appropriate resources for innovations made available by the institution?
   -- What was (were) the funding source(s) for the project? Institutional "hard" money? External "soft" funds? Federal? State? Private foundation?
   -- What restrictions were there on the use of funds? How much flexibility did project adminsitrators have?
   -- Who controlled resources? How were allocation decisions made?
   -- Were adequate resources available to get the job done?
   -- If resources were not adequate, what problems were created by the lack of resources? What modifications were made as a result?
6. Was there mutual adaptation between the innovation? Was the innovation consistent with institutional norms?
   - What kind of adaptations were made in the innovation? Was it changed in important ways?
   -- What kinds of adaptations were made in the organization or in people's behaviors in order to adopt the innovation? For example:
      Were faculty teaching loads altered?
      Were administrative policies or procedures changed?

RESISTANCE TO CHANGE

Talk with any group of instructional developers or others who work at bringing about change in education and you will hear a great deal about the difficulty of initiating change. The most common questions seem to be: How do you get faculty members to change? How do you overcome their resistance?

Zaltman, Florio and Sikorski (1977) made an interesting point about resistance to change in education. They observed that educators are often criticized for being among the most conservative groups when faced with proposed changes. They argue, however, that educators probably have more legitimate reasons for resisting changes than do other professionals, because few other groups have had so many innovations presented to them with so little evidence supporting their effectiveness.

Zaltman and Duncan (1977) point out that resistance can be a healthy, positive force that, in some instances, is quite justifiable. Resistance can also cause proposed changes to be made more compatible with the overall system into which they are being introduced. By addressing resistance in a constructive manner, it is possible to acquire additional information about the conditions, processes and relationships within an organization. Creative responses to resistance by instructional developers can both inform and enhance their contributions, especially during the formative stages of a project.

Seen in this context, it is possible to view resistance to change as a normal, healthy, constructive reaction. In fact, some changes are not creative, useful or practical and do not represent improvements over the status quo. Change agents should be careful to first explore, then, if appropriate, reduce this resistance through continued deliberation. In many instances, the gathering and intelligent use of data (needs-assessment data, product-evaluation data, post-course evaluation data, etc.) can provide a basis for acceptance of change.

Other Sources of Resistance

There is another side to the question of resistance. As Sarason (1971), Zaltman and Duncan (1977) and others point out, resistance to change may also be caused by the cultural values or beliefs of the target group or by their suspicion about the applicability of the proposed change. Whatever the cause, change agents are advised to move carefully when dealing with these sources of resistance, because the chances of successfully implementing a change are low if they are ignored. In a summary of factors to be taken into consideration in studying resistance, Watson (1967) describes four major

areas of concern:

1. Who brings the change?
2. What kind of change is it?
3. What procedures are used to institute the change?
4. In what kind of climate is the change proposed?

In a review of the literature about resistance to change, Zaltman et al. (1977) discuss five major sources of resistance:

1. cultural barriers
2. social barriers
3. organizational barriers
4. psychological barriers
5. attributes of the innovation

Similarly, Sikes, Schlesinger and Seashore (1974) report eight sources of resistance to change:

1. difficulty of demonstrating the value of the change
2. difficulty of the role of the change agent
3. parochialism
4. the ambiguous role of adminsitrators
5. lack of change-oriented concepts and skills by those involved
6. change-oriented personnel who are not in the mainstream of the organization
7. policies and practices of the organization which discourage change
8. difficulty of maintaining volunteer-based change-efforts.

Use of any of these models can facilitate the identification of sources and causes of resistance. This is a necessary step, but it is not sufficient by itself to overcome resistance. Resistance may stem from the fact that the target group sees no need for the change. Consequently, beginning with some identification of need is important, as was pointed out earlier in the discussion of change-models. In the change literature this is referred to as the identification of "performance gaps." Performance gaps refer to evidence of a discrepancy between the status quo and some desired state.

Importance of Performance Gaps

Resistance to change is natural unless the change has perceived value to the client group. It seems almost too simple to say that unless decision-makers and other key individuals see the need to change, the likelihood of change occurring is low, but this fact is often ignored. Durzo (1978) reports considerable evidence that serious change-efforts should begin with an attempt at problem analysis. Eraut (1975) argues that planned change should be defined as change undertaken in response to perceived problems.

Rogers and Rogers (1976) describe the identification of performance gaps as necessary before any innovation-process can take place. Zaltman et al. (1977) also stress the importance of identifying performance gaps in order to initiate the change-process. They conclude that performance gaps provide the major force for change in education. Lindquist (1978) also supports the importance of attention to performance gaps in his analysis of what is required to create change in higher education. He argues that unless organizational members, leaders or external supporters perceive a wide gap between what they think the organization is doing and what they feel it ought to be doing, they are not likely to bother with an effort to make a change. He does caution, however, that, unlike financial performance gaps, educational performance gaps are sometimes very difficult to perceive.

Lindquist's point is well taken. In higher education, where individual faculty members have authority and control over course content, it matters little that an instructional developer perceives a performance gap. What is important is that the people with the power to authorize and support a change-effort perceive the gap and believe it is important to close it. Simply demonstrating a performance gap will not automatically result in a major change-effort. However, it is unlikely that serious change will be attempted in the absence of an important performance gap perceived by the key decision makers and opinion-leaders of an organization.

Evaluation Questions

It would be overly optimistic to suggest that there is a simple way in which resistance to change could be analyzed in evaluating an instructional development project. There are simply too many factors involved for such an analysis to be a simple process. However, there are several key issues which emerge from the literature as important starting-points for evaluation: (1) Change-efforts should begin with a problem-solving stage. (2) Perceived need is established by the identification of performance gaps. (3) Proposed innovations should have a perceived advantage over present practice. (4) Pilot-tests and demonstrations are useful in establishing the utility of the innovation.

1. Did the instructional development effort begin with needs-assessment and problem-solving?
   - -- Was a needs-assessment done?
   - -- Who requested the needs-assessment?
   - -- Were the results of the needs-assessment believable to the faculty (or other clients)? To administrators?
2. Were there evident performance gaps or other pressures for change?
   - -- What perceived need was the project intended to meet?
   - -- Who perceived the need? What was the level of agreement about the existence of the need?
   - -- How important was it that the performance gap be closed? How much consensus was there about this? What groups or individuals

did not agree?

3. Did the proposed innovation have any advantage over present practice? Did it produce tangible results in a workable fashion?
   -- What advantages (benefits) does the innovative solution have over present practice?
   -- How was the innovation presented or "sold"? What benefits were the key selling-points?
   -- Did the innovation live up to its promises?
   -- Was the innovation perceived as a means of closing some important performance gap?
4. Was the innovation pilot-tested or given an experimental demonstration or trial?
   -- Was a pilot-test conducted?
   -- If no pilot-test was doen, what were the reasons for not doing one? Was this a problem for the project later?
   -- What decisions were made as a result of the pilot-test?
   -- What modifications were made as result of the pilot-test?

CHANGE AGENTS

Up to this point the chapter has focused upon individuals and groups, upon how they react to change and innovation, and upon the change-process itself. Another key element in the evaluation of innovative projects is a consideration of the people in the system who are working to produce change--change agents. Rogers (1972) described a change agent as "a professional who influences innovation decisions in a direction deemed desirable by a change agency." Instructional developers may be thought of as change agents, and similarly, instructional development clients themselves are also change agents in their own right, since they are designing innovations to be implemented within their own organizations. Consequently, understanding the roles played by change agents will be useful in evaluating instructional development projects.

Change Agent Roles

Havelock (1973) describes four primary change-agent roles:

1. **Catalyst:** to energize the change process and get things started.
2. **Solution-Giver:** to offer solutions and help clients adapt them to their situations.
3. **Process-Helper:** to assist clients in solving their own problems by helping them work through the problem-solving process.
4. **Resource-Linker:** to help clients find and make the best use of resources.

Of course, these four roles are not mutually exclusive. Change agents may play any or all of these roles in a single planned-change effort. Rogers and Shoemaker (1971) outline seven tasks which may be undertaken by change agents while assisting clients:

1. **Develops need for change:** The change agent is often initially required to help clients become aware of the need to change.
2. **Establishes a change relationship:** A change agent must establish rapport with his clients, since they must accept the change agent before they will accept his changes.
3. **Diagnoses the problem:** The change agent is responsible for analyzing the client's problem situation to determine why the existing alternatives are not working.
4. **Creates intent to change in the client:** The change agent's role here is to motivate his clients to pursue some change strategy.
5. **Translates intent into action:** The change agent works to achieve compliance with the suggested change and to be sure that action is taken.
6. **Stabilizes change and prevents discontinuances:** Here the change agent must positively reinforce those who undertook the change--usually in the trial-adoption stage.
7. **Terminates the relationship:** Since the end goal for a change agent should be the development of self-renewal capabilities for his clients, he should develop his clients' abilities and thereby lessen their need to rely upon him.

Internal or External Change Agents?

In addition to understanding the roles and tasks of the change agent, it is also helpful to examine the relationship of the change agent to the client group. One important factor in the relationship may be whether the change agent comes from within the system or from outside it. Havelock (1973) discusses the advantages and disadvantages of being a change agent from within the system--an "internal change-agent," and from outside the system--an "external change-agent." He believes that the internal change-agent has the following advantages and disadvantages:

Advantages

1. knows the system.
2. speaks the language.
3. understands the norms.
4. identifies with the system's needs and aspirations.
5. is a familiar figure.

Disadvantages

1. may lack perspective.
2. may not have the special skill relevant to the innovation.
3. may not have an adequate power-base.
4. may have to live down past failures.
5. may not have independence of movement, which will limit role.

Similarly, he describes the advantages and disadvantages of the external change-agent role:

Advantages

1. starts fresh and is not burdened by negative stereotypes.
2. is in a position to have perspective.
3. is independent of the power-structure.
4. is in a position to bring in something genuinely new.

Disadvantages

1. is a stranger.
2. may lack the knowledge of the insider about the system's norms, values and aspirations.
3. may not care enough.

It appears, then, that the two roles each have significant advantages and disadvantages. In most organizations, change is accomplished by some combination of people playing inside and outside roles. In many instances, change-teams include an outsider and an insider working together. This provides the benefits of both internal and external change-agents, while helping to minimize the disadvantages of each. Often, however, in large organizations, one person can be both an internal and an external agent, depending upon the perspective from which the person is viewed. On a college campus, for example, an instructional developer from an ID agency would be an inside change-agent with respect to the institution as a whole, but an external change-agent with respect to individual academic departments. Consequently, the developer would bring many of the advantages of both inside and outside change-agents to a project, but would also bring some of the disadvantages of each.

Similar or Different?

Another important variable in the change-agent relationship is the degree to which the change agent is similar to or different from the client group. Change agents who are similar to clients are those who share the general values, attitudes and beliefs of the client group. The more divergent these views become from the client, the more the change agent is perceived as "different." In a public school, for example, an instructional developer who was formerly a teacher in the system would have a greater similarity to the client group than would a person who had worked only in industry.

Zaltman and Duncan (1977) see each as having advantages and disadvantages which vary with different task-categories. For instance, when the client relationship is being established, they believe that the primary advantage of the change agent who is different from the client lies in a greater likelihood of being readily accepted as an "expert" who knows things the client does not know. They feel that this might encourage clients to be more open and to share their expectations regarding the change. On the other hand, during the stage when the situation is being diagnosed, the agent who is similar may have the advantage of being able to communicate more accurately and effectively with the clients because they share so many points of contact.

Because of this communication ability, the advantages of the "similar" change agent also include being able to interact effectively with the client system along various dimensions, such as dealing with resistance and maintianing change. According to Zaltman and Duncan a "different" change agent can overcome some of the disadvantages of not sharing the values, attitudes and beliefs of the client system by being emphathetic. They caution, however, that empathy should not be allowed to overshadow expertise, because it is often necessary to have a change agent who has a perspective which is significantly different from that of the client.

A succinct summary of the nature of change agents and their relationships with clients is provided by Rogers and Shoemaker (1971), who conclude that a change agent's success is positively related to the following factors:

1. the extent of the change effort.
2. the agent's client-orientation rather than change-agency orientation.
3. the agent's empathy with clients.
4. the extent to which the agent works through opinion leaders, and
5. the agent's credibility in the eyes of the clients.

Client Contact

The list provided by Rogers and Shoemaker also serves to amplify the difficulty that change agents face in trying to find ways to work successfully with various clients. Outsiders must find ways to make insiders feel comfortable with their presence in the organization, and inside change-agents must overcome the handicaps of the role before being able to utilize its advantages. Similarly, change agents who are unlike the clients must overcome the natural suspicion that "they don't really understand our problems." However, change agents who are like the clients must over-

come the handicap of having similar assumptions and training, which may act as blinders to new solutions.

To play the change-agent role properly requires competence in working with groups and in handling difficult situations with clients who may be suspicious, hostile or disinterested. Burke, (1980), in his interview with John Jones, stresses the importance of having adequate training in group-process skills in order to be well-prepared to assist clients in implementing change. Similarly, Bratton (1979-80), Coscarelli and Stonewater (1979-80), in a recent issue of the Journal of Instructional Development, all call for instructional developers to have increased training for the change-agent role. They describe the need for developers to have optimum "client-contact skills" in order to accomplish instructional development.

Havelock (1973), Schein (1969), and Davies (1975) all discuss the importance of the early stages of the relationship between the client and the change agent. They emphasize the need to begin the relationship on a trusting, positive note, with the roles and expectations of both clients and change agents clearly specified in order to maximize the possibility of success. In addition, Sarason (1971) urges change agents to tailor their efforts carefully to each individual situation so that the individual differences found in each setting are taken into consideration.

The final stages of the change process are also worthy of special mention. Lippit, et al. (1958), Havelock (1973), Davies (1975) and Schein (1969) have all written about the difficulties inherent in terminating the relationship between the change agent and the client as a project nears completion. The termination of the relationship is often as difficult and as crucial as is beginning the early phases of a relationship.

"People skills" are important to the change process and should not be overlooked during evaluation efforts. In many instances a project will succeed or fail in achieving its goals in large part because of the change-agent's skill at helping people through the change process. Successful change efforts require personal contact between the change agent and the client group. Havelock (1973) and House (1974) emphasize the importance of the change agent making personal contacts with formal leaders, opinion leaders, potential resisters and other key people in order to adequately carry out a planned change-effort. One advantage of personal contact is that it gives the change agent feedback on the reactions of members of the organization to the change process. In addition, contact with the change agent "forces" the person contacted to think about the project in a concentrated and serious manner.

Personal contact also allows the clients to express their fears, doubts, and expectations of difficulty to the change agent. Havelock feels that personal contact is most vital at the time when the client is about to try the innovation (the implementation stage). Experience in instructional development projects supports the importance of being available in person to help clients solve the problems which arise during the implementation of a newly-designed course. However, there is no research to support the conclusion that personal contact at this stage is any more important than at the early stages of the project. In fact, it is difficult to imagine just how an outside agent would establish the trust and confidence levels necessary without personal contact.

Evaluation Questions

Because the change agent-client relationship can be crucial for the success of a project, it should be examined as a part of the process of evaluating an instructional development project. The following ideas emerge from the literature as important: (1) An organization or individual should be available to support change efforts. (2) The role of the change agent and the nature of the relationship between the change agent and client group are important factors in the success (or failure) of any change effort. The following questions provide a beginning point from which to analyze the support-network for the project:

1. Was there an organization or structure to advocate and support change? Was assistance available?
   - -- Was there an instructional development agency, program, committee or office involved with the project?
     - If such a support group exists and was not involved, what are the reasons?
   - -- What was the nature of the informal support-network for the project?
   - -- Was a support agency or program involved in generating the project?
   - -- How do participants feel about the level of support within the institution?
2. Who played the role of change agent?
   - -- Who were the change agents? Were they volunteers or were they "drafted"?
   - -- What roles did the change agents play? Catalysts? Solution-givers? Process-helpers? Resource-linkers?
   - -- What kinds of activities did the change agents use to:
     - develop the need for change
     - establish change relationships
     - diagnose the problem
     - create intent to change
     - translate intent into action
     - stabilize change
     - end the relationship
   - -- Was the change agent internal or

external to the system? Did this cause problems? What were they?
-- Was there a team of change agents (internal/external)?

3. What was the nature of the relationship between the change agent(s) and the client?
-- Was the change agent "similar" to the client-group or "different"?
-- How well did the change agent work with the clients? How good were the change agent's client-contact skills?
-- How much personal contact was there between the change agent and the clients? What form did the contact take?
-- How did the change agent terminate the relationship with the clients? Was the client satisfied?
-- How self-sufficient are the clients at maintaining the innovation and managing new change without the help of the change agent?
-- What are the client's attitudes toward the change agent?

TOPICAL CHECKLIST

The evaluation of innovative projects in education is not simple. However, systematic application of what is known about change and innovation in education should provide evaluators with a useful approach to the exploration of issues important to the evaluation of innovation. The questions raised for consideration throughout this chapter certainly do not represent an exhaustive list of evaluation issues; however, they do provide a starting point for further analysis.

The following checklist is intended to serve as a quick-reference guide to key factors important to the evaluation of planned-change efforts. Use of the checklist can help evaluators plan a strategy for investigating the many important issues involved in analyzing planned-change efforts.

Checklist

I. THE PROBLEM (PURPOSE OF THE PROJECT)
- A. Identify the performance gap which the change-effort is intended to close.
- B. Identify and list pertinent data relevant to the performance gap.
- C. Determine whether this data supports the previously-specified performance gap. If not, restate it until there is consensus from those concerned with the change-effort as to the actual performance gap.
- D. Determine if the key people agree about the identified performance gap and the need to close it.

II. THE PEOPLE
- A. Evaluate the overall stage of awareness among people involved. Have they:
  1. acquired knowledge about the innovation?
  2. formed an opinion about it?
  3. made a decision to adopt or reject it?
  4. confirmed the decision?
- B. Identify the people in the following roles:
  1. gatekeepers
  2. opinion leaders
  3. formal leaders
- C. Determine which people are the:
  1. innovators?
  2. early adopters?
  3. early majority?
  4. late majority?
  5. laggards or resisters?
- D. Determine the adoption rate of these key people:
  1. gatekeepers
  2. opinion leaders
  3. formal leaders
- E. Determine what role(s) have been played by the change agent:
  1. catalyst
  2. solution-giver
  3. process-helper
  4. resource-linker
- F. Determine whether the change agent was:
  1. internal or external?
  2. similar or different?

III. THE ORGANIZATION
- A. Identify sources of institutional support and estimate the strength of that support.
- B. Identify possible sources of resistance to the change:
  1. cultural
  2. social
  3. organizational
  4. psychological
  5. specific attributes of the innovation
  6. political
  7. external forces
- C. Determine the status of the project within the organization:
  1. initiation stage?
  2. implementation stage?
  3. incorporation or continued-implementation stage?
  4. termination stage?
- D. Determine if the innovation has been developed internally or externally.
- E. Determine the current level of

usage of the innovation.

F. If at the implementation stage, specify the variety and degree to which the implementation is being supported.

G. Determine the current level of implementation and usage of the innovation. Analyze the reasons for variation from expected level.

H. Determine the level of satisfaction with the outcomes of the innovation among members of the organization. Is it doing what it was supposed to do?

REFERENCES

Bennis, W. G. Theory and method in applying behavioral science to planned organizational change. In W. D. Bennis, K. D. Benne, and R. Chin (Eds.), The Planning of Change. New York: Holt, Rinehart and Winston, 1969.

Berman, T. Greenwood, P. W., McLaughlin, M. W. and Pincus, J. Federal Programs Supporting Educational Change, Volume V: Executive Summary, R-1589/5-HEW. Santa Monica, California: Rand Corporation, 1975.

Bratton, B. The instructional development specialist as consultant. Journal of Instructional Development, 1979-80, 3 (2), 2-8.

Burke, W. W. Interview. Group and Organization Studies, 1980, 5, 272-294.

Coscarelli, W. C., and Stonewater, J. K. Understanding psychological styles in instructional development consultation. Journal of Instructional Development, 1979-80, 3, (2), 16-22.

Davies, I. K. Some aspects of a theory of advice: The management of an instructional developer-client, evaluator-client relationship. Instructional Science, 1975, 3, 351-373.

Durzo, J. J. Effecting Change In Higher Education: A Review of Literature With Implications For Instructional Development Programs--Research Report 14. Syracuse, New York: Syracuse University, Center for Instructional Development, 1978.

Eraut, M. Promoting innovation in teaching and learning: Problems, processes, and institutional mechanisms. Higher Education, 1975, 4 (1), 13-26.

Greenwood, P. W., Mann, D., and McLaughlin, M. W. Federal Programs Supporting Educational Change, Volume III: The Process of Change, R-1589/3-HEW.

Gross, N., Giacquinta, J. B., and Bernstein, M. Implementing Organizational Innovations. New York: Basic Books, 1971.

Hall, G. E. and Loucks, S. F. A developmental model for determining whether the treatment is actually implemented. American Educational Research Journal, 1977, 14, 263-276.

Havelock, R. G. The Change Agent's Guide to Innovation in Education. Englewood Cliffs, New Jersey: Educational Technology Publications, 1973.

House, E. R. The Politics of Educational Innovation. Berkeley, California: McCutchan, 1974.

Lewin, K. Group decision and social change. In E. E. Maccoby, T. M. Newcomb, and E. L. Hartley (Eds.), Readings in Social Psychology (3rd ed.). New York: Henry Holt and Company, 1958.

Lindquist, J. Strategies For Change. Berkeley, California: Pacific Soundings Press, 1978.

Lippit, R., Watson, J., and Westley, B. The Dynamics of Planned Change. New York: Harcourt, Brace and World, 1958.

Morris, L. L. and Fitz-Gibbon, C. T. How to Measure Program Implementation. Beverly Hills, California: Sage Publications, 1978.

Parlett, M. and Dearden, G. (Eds.). Introduction to Illuminative Evaluation. Cardiff-by-the-Sea, California: Pacific Soundings Press, 1977.

Rogers, E. M. Change agents, clients and change. In G. Zaltman, P. Kotler and I. Kaufman (Eds.), Creating Social Change. New York: Holt, Rinehart and Winston, 1972.

Rogers, E. M. and Rogers, R. A. Communication in Organizations. New York: Free Press, 1976.

Rogers, E. M. and Shoemaker, F. F. Communication of Innovations: A Cross-Cultural Approach. New York: Free Press, 1971.

Rutt, D. P. A framework for investigating consultation in instructional development. Journal of Instructional Development, 1979-80, 3 (2), 9-16.

Sarason, S. B. The Culture of School and the Problem of Change. Boston: Allyn and Bacon, 1971.

Schein, E. H. Process Consultation: Its Role in Organizational Development. Reading, Massachusetts: Addison-Wesley, 1969.

Sikes, W. W., Schlesinger, L. E., and Seashore, C. N. Renewing Higher Education From Within. San Francisco: Jossey-Bass, 1974.

Stake, R. E. The countenance of educational evaluation. Teachers College Record, 1967, 68, 523-540.

Stake, R. E. (Ed.). Evaluating the Arts in Education: A Responsive Approach. Columbus, Ohio: Charles E. Merril, 1975.

Stufflebeam, D. L., Foley, W. J., Gephart, W. J., Guba, E. G., Hammond, R. L., Merriam, H. O. and Provus, M. M. Educational Evaluation and Decision Making. Itasca, Illinois: F. E. Peacock Publishers, 1971.

Watson, G. Resistance to change. In G. Watson (Ed.), Concepts for Social Change. Washington: National Education Association, National Training Laboratories, Cooperative Program for Educational Development, 1967.

Zaltman, G. and Duncan, R. Strategies for Planned Change. New York: John Wiley and Sons, 1977.

Zaltman, F., Florio, D., and Sikorski, L. Dynamic Educational Change. New York: Free Press, 1977.

Zaltman, G., Duncan, R., and Holbek, J. Innovations and Organizations. New York: John Wiley and Sons, 1973.